



All Experimenters' Meeting

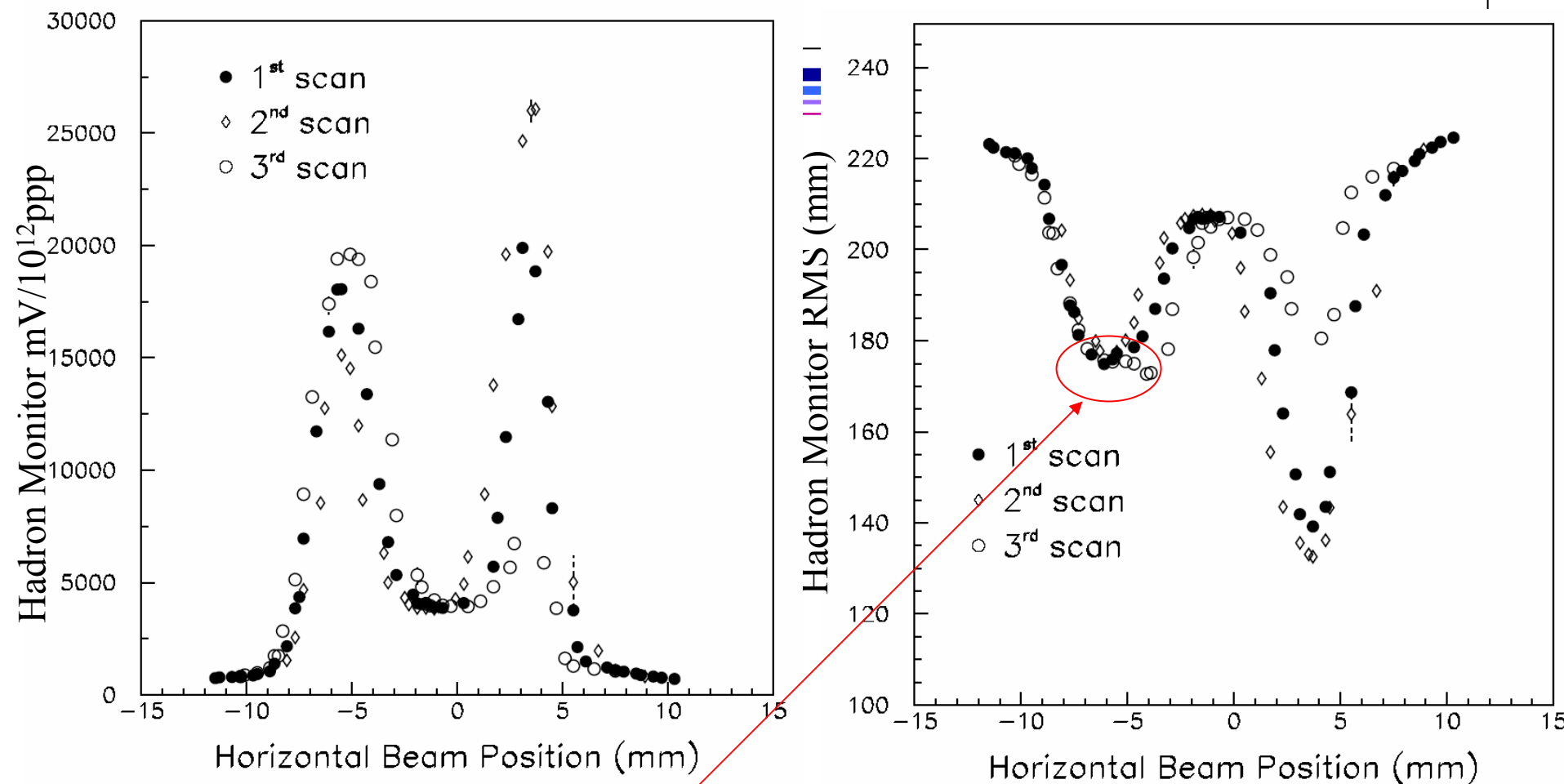
NuMI Target Situation/Status

All Experimenters' Meeting
April 25, 2005
NuMI Target Situation
D. Bogert
Page 1

Week of April 18 to April 25

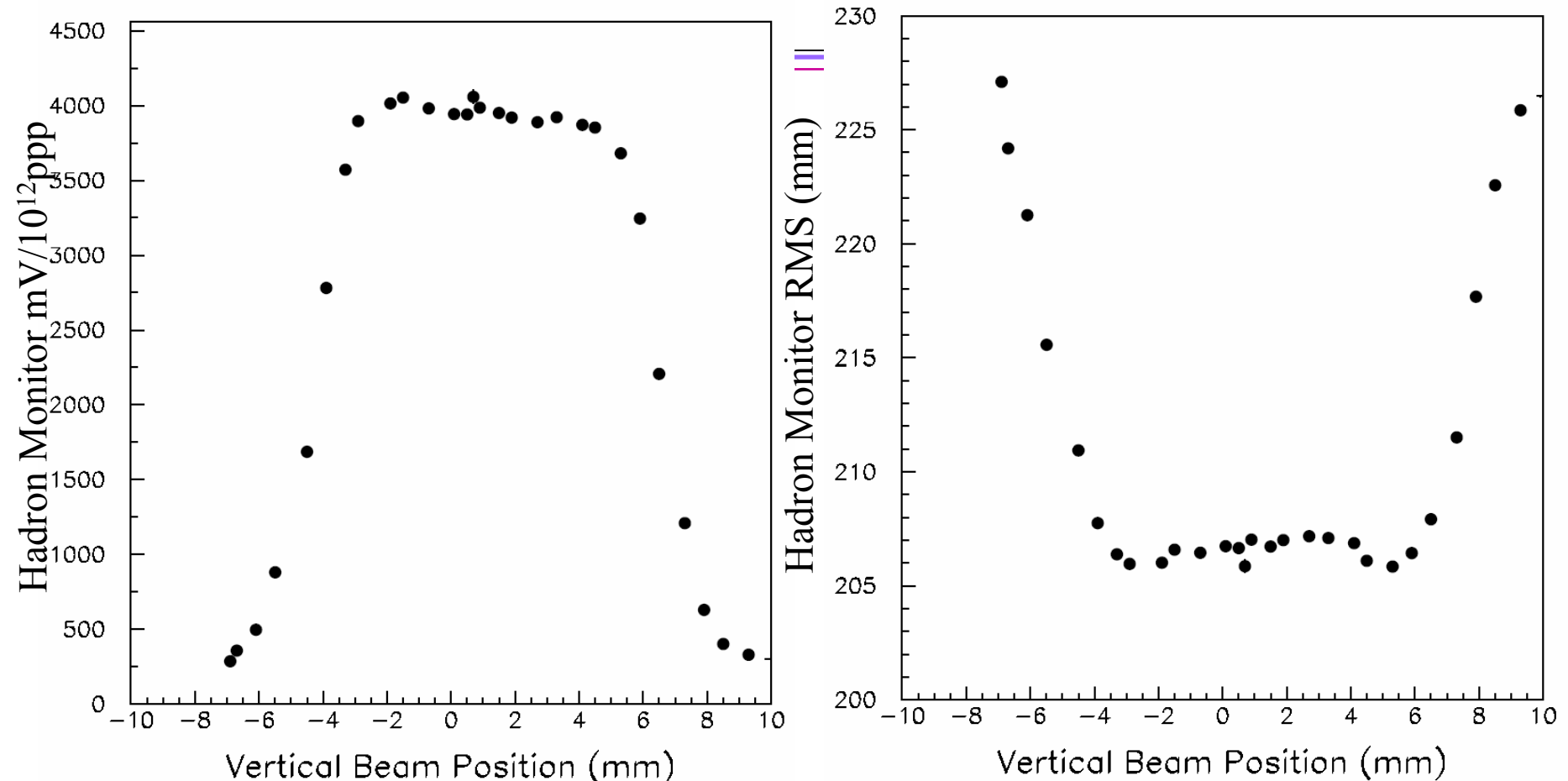
- 1) On Monday April 18 through Wednesday April 20 the Target Module was prepared for re-insertion in the Target Chase with the revised drain spool piece attached.**
- 2) The Target tip was re-surveyed, and preparations to operate the over-pressurized Helium system in the vacuum space were completed.**
- 3) On Wednesday evening April 20 low power target scans were made. The vertical scan looked identical to the situation prior to the leak. The horizontal scan showed an apparent obstruction to the west (beam left looking downstream.) The area to the east was clear – the target was dry.**
- 4) After reviewing the situation, it was determined that a structural web associated with the new spool piece was the source of the obstruction.**

Data from 4/20/05



- Notice the interesting feature – additional material in the beam?
- Data at beam right starts to look a lot like pre-accident.

Vertical Scan from 4/20/05



- The horizontal fin is visible, as before.
- NB: RMS~207mm at target center, just as before, which indicates *all fins intact*!



All Experimenters' Meeting

NuMI Target Situation/Status(2)

All Experimenters' Meeting
April 25, 2005
NuMI Target Situation
D. Bogert
Page 4

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- 5) It was determined that the obstruction was too close to beam center to leave.**
- 6) A redesign of the spool piece was completed. The target module was removed from the chase and returned to the work cell. The baffle was removed. The spool piece was removed.**
- 7) On Friday the revised spool piece was mounted and surveyed. There was no obstruction left – the hole was now bigger than the baffle shield.**
- 8) The vacuum plumbing was restored, vacuum was checked, and the baffle was restored. On Saturday the baffle and module were aligned, and the module prepared for reinsertion in the chase.**



All Experimenters' Meeting

NuMI Target Situation/Status(3)

All Experimenters' Meeting
April 25, 2005
NuMI Target Situation
D. Bogert
Page 5

9) In parallel with the above work, the RAW water system for horn one was over pressurized to check for a small possible leak. The leak was located at the higher pressure; it does not leak at normal operating pressure. No fix was attempted at this time.

Plans for week of April 25, 2005

- 1) Return the target module to the target chase. Insert target module shielding.**
- 2) Check alignment of the module in the chase.**
- 3) Perform low power scan.**
- 4) If all o.k., finish restoration of R block shields.**
- 5) Insert air gaskets; balance target air system. Operate at higher intensity.**



All Experimenters' Meeting

NuMI Target Situation/Status(4)

All Experimenters' Meeting
April 25, 2005
NuMI Target Situation
D. Bogert
Page 6

Longer term:

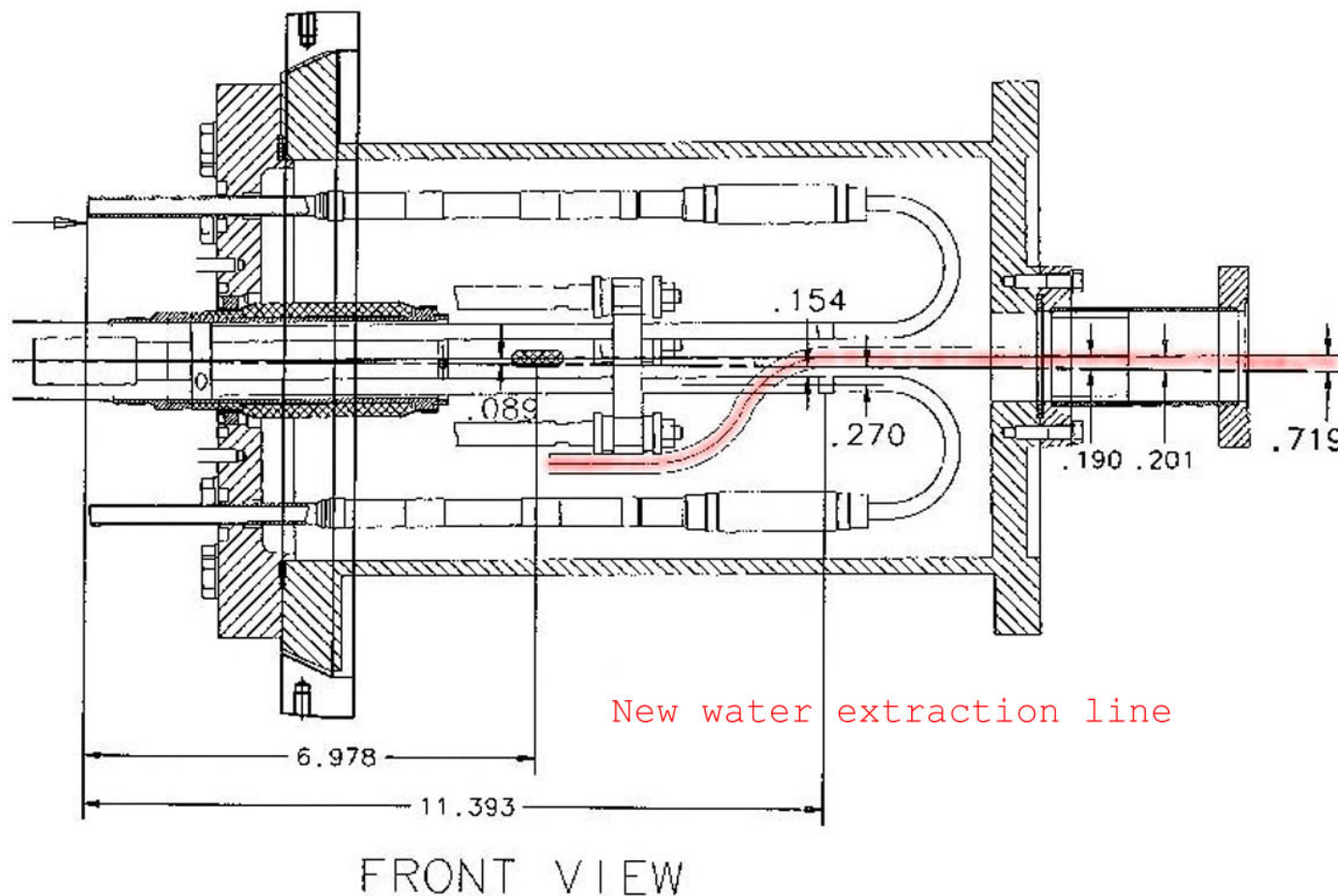
- 1) Modifications to the second (spare) target are being developed.**
- 2) An air cooled (lower power/lower intensity) back up target is being designed and built. Different materials require the MINOS Experiment to consider the use of this alternate target.**
- 3) Given the very long lead times involved, additional spare target materials have been ordered, and arrangements for production of two additional targets in Russia are being negotiated.**



All Experimenters' Meeting

NuMI Target Situation/Status(5)

All Experimenters' Meeting
April 25, 2005
NuMI Target Situation
D. Bogert
Page 7





All Experimenters' Meeting

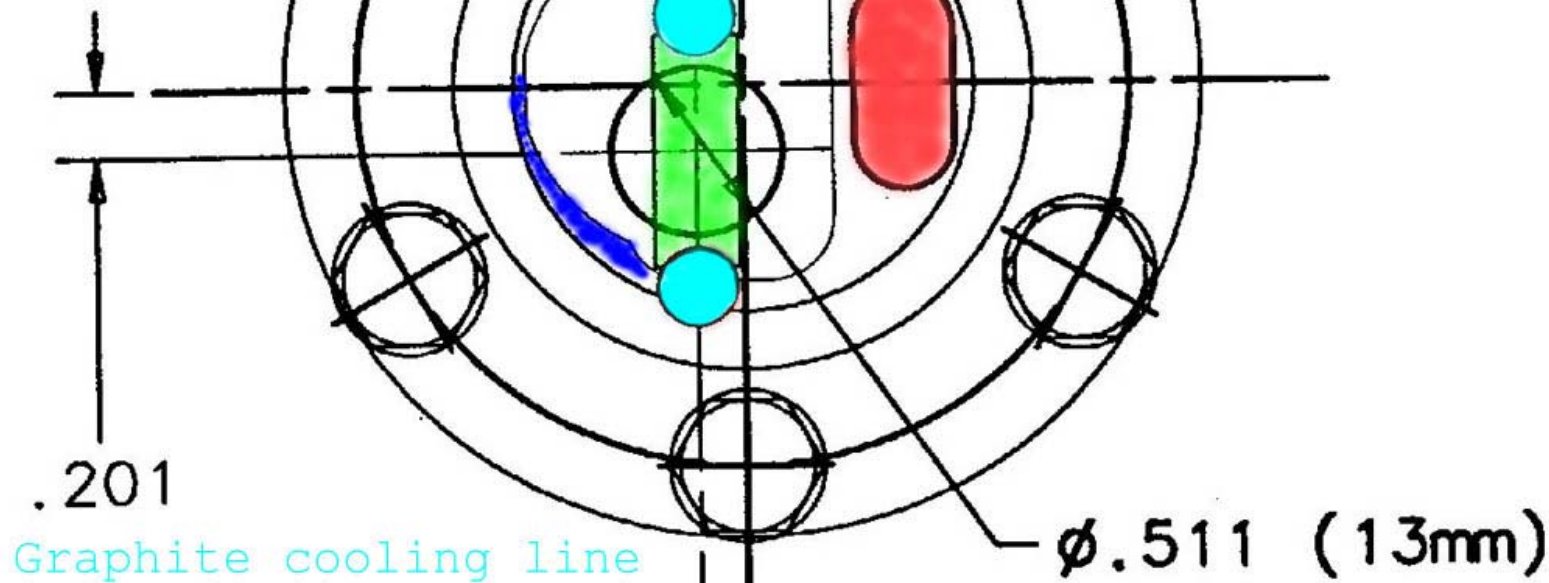
NuMI Target Situation/Status(6)

All Experimenters' Meeting
April 25, 2005
NuMI Target Situation
D. Bogert
Page 8

Region where
some material
was removed
according to
G. Waver
(not exact)

Water extraction tube

Graphite target



All Experimenters' Meeting

NuMI Target Situation/Status(7)

